CLAIMS

1. A procedure for controlling the useful life of the gas turbines of a plant by means of a production plant (10) comprising a series of production trains (15) and an auxiliary gas generator group (40), each production train of said series of trains (15) being in turn equipped with a series of gas turbine groups (20), each of which in turn includes a gas generator, characterized in that it comprises the following phases:

a) creating a succession (20', 20'', 20'''...) of gas generator groups of gas turbines (20) to be subjected to maintenance;

b) substituting the first gas generator group of gas turbines (20') of said succession (20', 20'', 20'''...) with said auxiliary gas generator group (40), to keep the production plant (10) functioning almost continuously;

c) controlling the first substituted gas generator group of gas turbines (20'), by subjecting it to ordinary maintenance operations;

d) substituting the second gas generator group of gas turbines (20'') of said succession (20', 20'', 20'''...) with said first controlled gas generator group of gas turbines (20');

e) controlling the second substituted gas generator group of gas turbines (20''), by subjecting it to ordinary

maintenance operations;

f) repeating said phases b), c) d) and e) for all the gas generator groups of gas turbines (20) of said succession (20', 20'', 20'''...) until all the gas generator groups of the gas turbines (20) of said plant (10) have been subjected to control and maintenance.

2. The procedure for controlling the useful life of the gas turbines of a plant according to claim 1, characterized in that during the substitution phases of the gas generator groups of gas turbines of said succession, only the group of gas turbines (20) to be substituted is stopped.

3. The procedure for controlling the useful life of the gas turbines of a plant according to claim 1 or 2, characterized in that during the substitution operations of said gas generator groups of gas turbines (20), the group to be substituted is only stopped for the minimum time necessary for effecting the substitution.

4. The procedure for controlling the useful life of the gas turbines of a plant according to any of the previous claims, characterized in that at the end of phase c), the first controlled gas generator group of gas turbines (20') substitutes the second gas generator group of gas turbines (20'').

5. The procedure for controlling the useful life of the

gas turbines of a plant according to any of the previous claims, characterized in that said production plant (10) comprises four production trains (15).

6. The procedure for controlling the useful life of the gas turbines of a plant according to any of the previous claims, characterized in that each production train of said series of trains (15) comprises two groups of gas turbines (20) for liquefying gas, by compression/cooling.

7. The procedure for controlling the useful life of the gas turbines of a plant according to any of the previous claims, characterized in that each gas generator group comprises at least a number of gas generators equal to the number of gas turbines present in the group of gas turbines.

8. The procedure for controlling the useful life of the gas turbines of a plant according to claim 7, characterized in that said gas turbine (20) is a "heavy duty" gas turbine.

9. The procedure for controlling the useful life of the gas turbines of a plant according to claim 1, characterized in that said gas generator comprises a power turbine (34) and a discharge outlet 36.